What is claimed is:

1. A method of optimizing a coefficient of performance of a refrigeration system comprising the steps of:

compressing a refrigerant to a high pressure in a compressor device;

cooling said refrigerant by exchanging heat between said refrigerant and a fluid medium in a heat rejecting heat exchanger;

expanding said refrigerant to a low pressure in an expansion device;

evaporating said refrigerant by exchanging heat between said refrigerant and an airflow in a heat accepting heat exchanger;

sensing a parameter of said refrigeration system;

comparing said parameter to an efficiency parameter representative of an efficient refrigeration system;

determining if the refrigeration system is operating at an efficient state or an inefficient state; and

adjusting said refrigeration system if the step of determining said state of efficiency determines that the refrigeration system is operating at said inefficient state.

2. The method as recited in claim 1 wherein said refrigerant is carbon dioxide.

3. The method as recited in claim 1 wherein said parameter is an outlet temperature of said refrigerant exiting said heat rejecting heat exchanger.

4. The method as recited in claim 1 wherein said parameter is an outlet enthalpy of said refrigerant exiting said heat rejecting heat exchanger.

5. The method as recited in claim 1 wherein said parameter is a pressure drop of said refrigerant across said heat rejecting heat exchanger.

6. The method as recited in claim 1 wherein said parameter is a flow rate of said fluid that exchanges heat with said refrigerant in said heat rejecting heat exchanger.

7. The method as recited in claim 1 wherein said parameter is a difference between a refrigerant temperature of said refrigerant exiting said heat rejecting heat exchanger and a fluid temperature of said fluid entering said heat rejecting heat exchanger.

8. The method as recited in claim 1 wherein said parameter is a suction pressure of said refrigerant entering said compressor device.

9. The method as recited in claim 1 wherein said parameter is a temperature of said refrigerant exiting said compressor device.

10. The method as recited in claim 1 wherein said parameter is an opening of said expansion device.

11. The method as recited in claim 1 wherein said parameter is a quality of said refrigerant entering said heat accepting heat exchanger.

12. The method as recited in claim 1 wherein said parameter is a coefficient of performance of the refrigeration system

13. The method as recited in claim 1 wherein said parameter is a refrigerant mass flow rate of the refrigeration system.

14. The method as recited in claim 1 wherein the step of adjusting said refrigeration system includes increasing a flow rate of said fluid medium through said heat rejecting heat exchanger.

15. The method as recited in claim 1 wherein the step of adjusting said refrigeration system includes increasing an opening of said expansion device.

16. A transcritical refrigeration system comprising:

a compression device to compress a refrigerant to a high pressure;

a heat rejecting heat exchanger for cooling said refrigerant, and a fluid flows through said heat rejecting heat exchanger to exchange heat with said refrigerant;

an expansion device for reducing said refrigerant to a low pressure;

a heat accepting heat exchanger for evaporating said refrigerant, and an airflow exchanges heat with said refrigerant in said heat accepting heat exchanger;

a sensor to sense a parameter of the refrigerant system; and

a control that stores an efficiency value of said parameter representative of an efficient state of the refrigeration system, compares said efficiency value to said parameter to determine if the refrigeration system is in an efficient state or an inefficient state, and adjusts the refrigeration system if the refrigeration system is determined to be in an inefficient state.